TANGO Device Server

GalilPiezoAna User's Guide

GalilPiezoAna Class

Revision: release_1_0_3 - Author: coquet
Implemented in C++

Introduction:

handles Piezo devices controled by Galil through : 1 analog output 1 analog feedback

Class Inheritance:

- Tango::Device_3Impl
  - GalilPiezoAna

Properties:

Device Properties		
Property name	**Property type**	**Description**
AxisBoxAttachement	Tango::DEV_STRING	name of the GalilBox device
AxisNumber	Tango::DEV_STRING	axis number can be A B C D E F G H default : A
MotoristRatio	Tango::DEV_DOUBLE	User Position in user units = (MotoristRatio hardware read) + MotoristOffset Y = AX + B
MotoristOffset	Tango::DEV_DOUBLE	User Position in user units = (MotoristRatio hardware read) + MotoristOffset Y = AX + B
MovingTime	Tango::DEV_LONG	There is no possibiliy to have a feedback of the actual positionning state, so when a move is requested we start a timer an declare the stazte as MOVING Time is in milliseconds Default : 100
MotoristMemo	Tango::DEV_STRING	motorist memo
HasAnalogFeedback	Tango::DEV_BOOLEAN	true if piezo motor has an analog feedback (i.e. position is returned as analog value) the position is the analog value if false : position returned is the commanded position
CommandName	Tango::DEV_STRING	name of the ControlBox direct command : for GalilV1 : WriteRead for GalilV2 : ExecLowLevelCommand

Device Properties Default Values:

Property Name	**Default Values**
AxisBoxAttachement	No default value
AxisNumber	No default value
MotoristRatio	No default value
MotoristOffset	No default value
MovingTime	No default value
MotoristMemo	No default value
HasAnalogFeedback	No default value
CommandName	No default value

There is no Class properties.

States:

States	
Names	**Descriptions**
UNKNOWN	no communication with the controlbox
STANDBY	ready to accept requests
MOVING	motor is moving (simulated by a timer
OFF	motor is OFF

Attributes:

Scalar Attributes			
Attribute name	**Data Type**	**R/W Type**	**Expert**
position: Position in user units	DEV_DOUBLE	READ_WRITE	No
analogValue: analog Value of the analog feedback	DEV_DOUBLE	READ_WRITE	Yes

Commands:

More Details on commands....

Device Commands for Operator Level		
Command name	**Argument In**	**Argument Out**
Init	DEV_VOID	DEV_VOID
State	DEV_VOID	DEV_STATE
Status	DEV_VOID	CONST_DEV_STRING
On	DEV_VOID	DEV_VOID
Off	DEV_VOID	DEV_VOID

Device Commands for Expert Level Only		
Command name	**Argument In**	**Argument Out**
SetAxisConfiguration	DEV_VOID	DEV_VOID

1 - Init

- **Description:** This commands re-initialise a device keeping the same network connection.
  After an Init command executed on a device, it is not necessary for client to re-connect to the device.
  This command first calls the device *delete_device()* method and then execute its *init_device()* method.
  For C++ device server, all the memory allocated in the *nit_device()* method must be freed in the *delete_device()* method.
  The language device desctructor automatically calls the *delete_device()* method.

- **Argin:**
  DEV_VOID : none.

- **Argout:**
  DEV_VOID : none.

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

2 - State

- **Description:** This command gets the device state (stored in its *device_state* data member) and returns it to the caller.

- **Argin:**
  DEV_VOID : none.

- **Argout:**
  DEV_STATE : State Code

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

3 - Status

- **Description:** This command gets the device status (stored in its *device_status* data member) and returns it to the caller.

- **Argin:**
  DEV_VOID : none.

- **Argout:**
  CONST_DEV_STRING : Status description

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

4 - SetAxisConfiguration (for expert only)

- **Description:** initialises the axis (sets the PID settings to zero

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::STANDBY
  - Tango::OFF

5 - On

- **Description:** turns the axis ON (command SH)

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

6 - Off

- **Description:** turns the axis OFF (command MO)

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::OFF

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Commands:

More Details on commands....

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Command name	**Argument In**	**Argument Out**
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State	DEV_VOID	DEV_STATE
Status	DEV_VOID	CONST_DEV_STRING
On	DEV_VOID	DEV_VOID
Off	DEV_VOID	DEV_VOID

Device Commands for Expert Level Only		
Command name	**Argument In**	**Argument Out**
SetAxisConfiguration	DEV_VOID	DEV_VOID

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- **Argin:**
  DEV_VOID : none.

- **Argout:**
  DEV_VOID : none.

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

2 - State

- **Description:** This command gets the device state (stored in its *device_state* data member) and returns it to the caller.

- **Argin:**
  DEV_VOID : none.

- **Argout:**
  DEV_STATE : State Code

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

3 - Status

- **Description:** This command gets the device status (stored in its *device_status* data member) and returns it to the caller.

- **Argin:**
  DEV_VOID : none.

- **Argout:**
  CONST_DEV_STRING : Status description

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

4 - SetAxisConfiguration (for expert only)

- **Description:** initialises the axis (sets the PID settings to zero

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::STANDBY
  - Tango::OFF

5 - On

- **Description:** turns the axis ON (command SH)

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

6 - Off

- **Description:** turns the axis OFF (command MO)

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::OFF

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Device Commands Description
GalilPiezoAna Class

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  For C++ device server, all the memory allocated in the *nit_device()* method must be freed in the *delete_device()* method.
  The language device desctructor automatically calls the *delete_device()* method.

- **Argin:**
  DEV_VOID : none.

- **Argout:**
  DEV_VOID : none.

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

2 - State

- **Description:** This command gets the device state (stored in its *device_state* data member) and returns it to the caller.

- **Argin:**
  DEV_VOID : none.

- **Argout:**

DEV_STATE : State Code

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

3 - Status

- **Description:** This command gets the device status (stored in its *device_status* data member) and returns it to the caller.

- **Argin:**
  DEV_VOID : none.

- **Argout:**
  CONST_DEV_STRING : Status description

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

4 - SetAxisConfiguration (for expert only)

- **Description:** initialises the axis (sets the PID settings to zero

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::STANDBY
  - Tango::OFF

5 - On

- **Description:** turns the axis ON (command SH)

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::MOVING
  - Tango::OFF

6 - Off

- **Description:** turns the axis OFF (command MO)

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::STANDBY
  - Tango::OFF